

ABSTRACT

A thermal control device for controlling the temperature of a craft/spacecraft is an electrostatic switch causing a large change in apparent emissivity. A flexible covering has a high emissivity and makes close contact with the surface of the spacecraft when electrostatically attracted thereto, when the covering is out of contact, the spacecraft surface emissivity controls radiation. The device can operate with moderate levels of DC voltages. Application of voltage results in high emissivity while removal of voltage allows a separator to move the covering out of contact and thus results in low emissivity.